The variables in C#, are categorized into the following types −

* Value types
* Reference types
* Pointer types

Value Type

Value type variables can be assigned a value directly. They are derived from the class **System.ValueType**.

The value types directly contain data. Some examples are **int, char, and float**, which stores numbers, alphabets, and floating point numbers, respectively. When you declare an **int** type, the system allocates memory to store the value.

The following table lists the available value types in C# 2010 −

|  |  |  |  |
| --- | --- | --- | --- |
| **Type** | **Represents** | **Range** | **Default Value** |
| bool | Boolean value | True or False | False |
| byte | 8-bit unsigned integer | 0 to 255 | 0 |
| char | 16-bit Unicode character | U +0000 to U +ffff | '\0' |
| decimal | 128-bit precise decimal values with 28-29 significant digits | (-7.9 x 1028 to 7.9 x 1028) / 100 to 28 | 0.0M |
| double | 64-bit double-precision floating point type | (+/-)5.0 x 10-324 to (+/-)1.7 x 10308 | 0.0D |
| float | 32-bit single-precision floating point type | -3.4 x 1038 to + 3.4 x 1038 | 0.0F |
| int | 32-bit signed integer type | -2,147,483,648 to 2,147,483,647 | 0 |
| long | 64-bit signed integer type | -9,223,372,036,854,775,808 to 9,223,372,036,854,775,807 | 0L |
| sbyte | 8-bit signed integer type | -128 to 127 | 0 |
| short | 16-bit signed integer type | -32,768 to 32,767 | 0 |
| uint | 32-bit unsigned integer type | 0 to 4,294,967,295 | 0 |
| ulong | 64-bit unsigned integer type | 0 to 18,446,744,073,709,551,615 | 0 |
| ushort | 16-bit unsigned integer type | 0 to 65,535 | 0 |